

Traffic Safety and Operations Committee Report

Chair/Presenter: Richard Lyles

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Committee Members

- ~75 people on the committee mailing list, many of whom participated in one way or another
- ~15 members wrote one or more of the research problem statements or helped with report editing
- the report received wide circulation among public agencies, universities, consultants, and industry

Process

- general meeting to tentatively identify RPS topics and overarching areas
 - specific RPS developed by individuals or two-person teams
 - priorities established by vote and assigned
 - overarching themes redefined and some editing done for final report
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Overarching Themes

33 RPS grouped within five general themes

- intelligent transportation systems (10)
- driver behavior and safety (7)
- work zone safety (4)
- data collection, retrieval, and management (4)
- operations and safety issues (8)

RPS in ITS

Title	Dur	Pri
Virtual Testbed for Vehicle Infrastructure Integration (VII)	24	L
Development of an Intelligent Transportation System Maintenance Plan for Michigan	12	L
Development of an ITS Management Plan for the Michigan Department of Transportation	108	M

RPS in ITS

Title	Dur	Pri
Determination of Interdisciplinary Ways to Reduce Congestion and Increase Transportation System Capacity	18	H
Evaluation of New Concepts and Technologies in Traffic Signal Control	12	H
Prediction and Characterization of Freeway Congestion	12	M

RPS in ITS

Title	Dur	Pri
Using Dedicated Short-Range Communications Technology for Incident Detection on Rural Interstates	18	M
Optimizing Investments in Rural ITS Applications in Michigan	9	M
Exploration of Potential for Electronic Identification of Hazardous Material Vehicles	9	L

RPS in ITS

Title	Dur	Pri
In-Vehicle Technology and Cognitive Loads		L

RPS in driver behavior and safety

Title	Dur	Pri
Older Driver Behavior	72	M
Older Drivers: Impacts on Traffic Safety and Operations	18	H
Effective Components of Graduated Driver Licensing	24	L
Beyond Skills: Driver Education for Safety	24	L

RPS in driver behavior and safety

Title	Dur	Pri
Role of Driver Distraction in Vehicle Crashes in Michigan	18	M
Safety Improvements for Older Drivers	36	M
Safety Improvements for Younger Drivers	36	L

RPS in work zone safety

Title	Dur	Pri
Development of Work Zone Speed Limit Methodology	12	H
Countermeasure Development for Work Zone Speed Control	12	H
Impacts of Vehicle Speed on Safety and Traffic Crashes in Highway Work Zones	12	H
What Specific Traffic Control Devices should be Required for Short Duration Work Zones	12	L

RPS in data collection, retrieval, and management

Title	Dur	Pri
Development of Statewide Traffic Data Management System	48	H
Investigation and Assessment of New Technologies for Data Collection for Asset Management Activities	12	H
Mining the Michigan Traffic Crash Database to Extract and Discover New Useful Correlations	18	H

RPS in data collection, retrieval, and management

Title	Dur	Pri
Improving Reliability of Transportation Systems—the Case of Travel Time Predictions and System Condition Assessment	18	M

RPS in operations and safety issues

Title	Dur	Pri
Pedestrian Crash Location Identification	12	M
Motorcycle Exposure Study	12	L
Resource Allocation to Optimize Safety Improvements	18	M
Share the Road Campaign	12	L
Impacts of Alternative Designs on Transportation Safety and Operations and Non-Motorized Users	60	M

RPS in operations and safety issues

Title	Dur	Pri
Determine Criteria for Implementing Protected-Only-Left-Turn Phasing instead of Permitted/Protected Left-Turn Phasing	12	H
Determining Relative Safety of Box Span Design and Diagonal Span Design for Traffic Signals	24	M
Statewide Commercial Vehicle Crash Analysis and Development of Safety Measures	24	H